Received November 18, 1766.

## XIII. *Some Observations on Swarms of Gnats, particularly one seen at* Oxford, August 20, 1766. *In a Letter to* Charles Morton, *M. D. Sec. R. S. from the Rev.* John Swinton, *B. D. F. R. S. Member of the Academy* degli Apatisti *at* Florence, *and of the* Etruscan *Academy of* Cortona *in* Tuscany.

Dear Sir,

Read Feb. 26, 1767. THE gnats have been more numerous, as well as more noxious, here, during the months of July, August, and September, 1766, than perhaps they were ever known to be before in the memory of man. So many myriads of them have sometimes occupied the same part of the atmosphere, in contiguous bodies, that they have resembled a very black cloud, greatly darkened the air, and almost totally intercepted the solar rays. The repeated bites likewise of these malignant insects have been so severe, that the legs, arms, heads, and other parts, affected by them, in many persons, have been swelled to an enormous size. The colour also of these parts, at the same time, was red and fiery, perfectly similar to that of some of the most alarming inflammations.

As the natural history of these troublesome insects is sufficiently known, having been given us, with great accuracy

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accuracy and preciſion, by Mouſet, Swammerdam, Reaumur, and others, it would be ſuperfluous to expatiate upon them here. But I cannot forbear taking notice of one very remarkable property of theſe little miſchievous animals, which lately preſented itſelf to my view, and which has not yet perhaps been duly attended to by any naturaliſt. Being in the garden belonging to the Fellows of Wadham College, with the Reverend Mr. Allen, Fellow of that houſe, on Wedneſday, Auguſt 20, 1766, about half an hour before ſun-ſet, ſuch an immenſe number of gnats filled the atmoſphere, in which we breathed, as I had never ſeen before. We both of us alſo then obſerved ſix columns, formed intirely of theſe inſects, aſcending from the tops of ſix boughs of an apple-tree, in another garden, ſeparated from that we were in by a partition-wall, to the height of at leaſt fifty or ſixty feet. Two of theſe columns ſeemed perfectly erect and perpendicular, three of them oblique, and one approached ſomewhat towards a pyramidal form. That bodies of gnats, in figure a little ſimilar to the pillars mentioned here, are now and then to be ſeen, we learn from an ingenious * author; but that theſe bodies ever aſcend fifty or ſixty feet, has not, I believe, been yet obſerved by any zoologer or natural hiſtorian.

It may not be improper to remark, that ſome of theſe gnats had their bodies greatly diſtended, and ſwoln much beyond their uſual ſize, by the uncommon quantities of blood they had imbibed. One of them, in particular, being killed at the caſtle here, ſeemed conſiderably larger than any of the reſt, and

* Tho. Mouſet, *Inſector. ſive Minimor. Animal. Theatr.* c. xiii. p. 82. Londini, 1634.

had as much blood expreſſed from it as ſtained or beſmeared part of a wall three or four inches ſquare.

I have been informed by the Reverend Dr. Wyndham, Warden of Wadham College in this Univerſity, that, about thirty years ago, many columns of gnats were perceived to riſe from the top of the ſteeple of the cathedral church at Saliſbury, by a conſiderable number of people. He likewiſe declared, that theſe columns were ſeen both by himſelf and the Reverend Dr. John Clarke, then Dean of Saliſbury; that, at a ſmall diſtance, they reſembled ſmoke; and that this at firſt occaſioned a ſort of alarm, many believing that the church was on fire.

I ſhall only beg leave at preſent to add, that the Reverend Mr. Berkeley, Student of Chriſt-Church, as he aſſured me, was entertained with an appearance ſimilar to that I had ſeen, the ſame evening, in the country, at a ſmall diſtance from Oxford; that ſome of the bodies of gnats perceived by him, unleſs he was deceived, aſcended much higher than thoſe I had obſerved; and that I am, with all due ſentiments of reſpect, Sir,

Your much obliged,

and moſt obedient,

humble ſervant,

Chriſt-Church, Oxon.
Nov. 15, 1766.

John Swinton.